

The Claims

What is claimed is:

1. A method for thermally degassing the water in a water-steam cycle,
5 the water-steam cycle including a water volume and a steam volume, the method comprising:

extracting water from the water volume;
extracting steam from the steam volume;
admixing said water with said steam to form a two-phase mixture;
10 feeding the resulting two-phase mixture into the water volume.

2. The method of claim 1, further comprising:
operating a jet injector as a jet pump in passing the extracted water through
the jet pump as a motive fluid and sucking steam through a suction side of the jet pump.

3. The method of claim 1, further comprising:
setting the steam content of the two-phase mixture to a value in the range
from 2% to 5%.

4. The method of claim 1, wherein the feeding comprises injecting the
two-phase mixture into the water volume through nozzles.

5. The method of claim 1, wherein the feeding comprises injecting the
two-phase mixture at an excess pressure of 1 to 2 bar.

6. The method of claim 1, further comprising:
temporarily interrupting degassing of the water.

7. The method of claim 1, wherein the steam volume is located
30 immediately adjacent the water volume.

8. The method of claim 7, wherein the steam volume is located above the water volume.

5 9. The method of claim 1, wherein the steam volume and the water volume are contained in a common vessel.

10. A device for thermally degassing water in a water-steam cycle, comprising a vessel with a plurality of nozzles arranged in a lower part of the vessel.

10 11. The device of claim 10, wherein the vessel comprises a water extraction point and a steam extraction point, and the device further comprises:
a pump having a suction side in fluid connection with the water extraction point and a pressure side in fluid connection with the nozzles; and
a water jet injector arranged as a jet pump in a flow path from the pump to
15 the nozzles, and having a suction side connected to the steam extraction point.

12. The device of claim 10, wherein the vessel comprises a feedwater inlet and a feedwater outlet, and wherein the nozzles are arranged between the feedwater inlet and the feedwater outlet.

20 13. The device of claim 10, further comprising flow obstacles for improved mixing of the water in the water volume, the flow obstacles being arranged in a flow path from the feedwater inlet to the feedwater outlet.

25 14. The device of claim 10, wherein the vessel comprises an inlet connected to an evaporator, a steam outlet, and an outlet for the extracted gases, with the inlet and the steam outlet being arranged in a first area of the vessel and the outlet for the extracted gases being arranged in a second area of the vessel different from the first area.

30 15. The device of claim 14, wherein the nozzles are arranged in a second area of the vessel.

16. The device of claim 10, wherein the nozzles are arranged in a lower half of the vessel.

17. The device of claim 10, wherein the nozzles are arranged in a lower third of the vessel.